Snowing at 1,200 Feet Over Pensacola

by Lt. Marc Overman

There we were, about to land at another glorious, random stop and assume the backup. The pilot was in the left seat, and I was in the right seat. The aircraft was descending from 2,000 feet to 1,200 feet on the 12 DME arc at NAS Pensacola.

As the pilot pushed up the power to level off, a very audible bang shook up the aircraft. I grabbed the yoke and looked at the engine stack. My first instinct was that a compressor had stalled in one of the engines, and I was waiting for secondary indications. The engines looked good, though. A moment later, everyone's ears told the story of what was happening. Even with the aircraft at 1,200 feet, the loss of cabin pressure cleared everyone's ears. We also heard a low, deep rumble.

The ever-ready ACO-T [airborne communications officer (trainee)] reported, "Flight, Comm, we have a problem." The flight engineer reported that we had lost all bleed air to the ACM. If we had lost a duct, where was it? Was it on the wing, and was hot bleed air blowing on the fuel tank? Was it in the aircraft structure?` Or was it inside the aircraft, damaging all the aircraft avionics?

My thoughts were interrupted by the ACO clarifying his earlier statement, saying it was "snowing" in Comm. This phenomenon perplexed me. Using the PA, I announced the problem. I didn't call for oxygen masks, because we were at such a low altitude. The FE, in the meantime, was shutting off the bleed-air valves for each engine, thereby isolating the air to the ducts. Once he had done that, the sound and the "snow" subsided.

Assessing the situation was now straightforward. We broke off the approach, and told NAS Pensacola we needed to fly direct to the field for a visual full stop. We notified them that we had lost pressure and required no assistance. We had four good engines, would be at landing weight on final, and may have some damage to the aircraft. Checking our configuration, we decided to continue to the full stop.

Coming down on final, everyone started to cough due to the "snow" fibers, which were actually insulation from the duct floating in the air. Double-checking our clearance to land, we made an uneventful full stop.

We discovered that the stainless-steel crossover duct for the port engines had shredded in the aft part of the forward lower lobe. Further investigation showed that a tap-off valve, which was attached to the duct, had separated during the blowout. This allowed it to swing down and strike the forward outflow valve and another fiberglass duct, which in turn sheared off the top of the vacuum pump. The valve had closed as advertised, keeping the rest of the pressure we had in the cabin relatively stable. The other fiberglass duct came away with a 4-by-2-inch dent.

The E-6 airframe had never before produced this sort of emergency. In this case, our crew made up for the lack of written procedures by acting calmly and competently.

Lt. Overman is the avionics division officer with VQ-3.